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**Sent:** Tue 2/21/2012 11:53:05 PM  
**Subject:** Unimpaired Flow

I'm not a biologist, but I play one on TV.

Bruce and Karen are both gone far away, to a happier place, and there is some unclear reference in the draft materials to "unimpaired flows". Brock apparently wonders what that is about.

At the risk of both error and oversimplification, here's what I know and why it may be important to have the workshop do some thinking about unimpaired flows.

First, unimpaired flows is a surrogate for "what would the natural hydrology be, if there were no projects?" In the 1994 rule, which was picked up as the X2 standard by the State Board, I think we used the "8-river index" to tell us when we were in a "naturally" wet, average, dry etc. year. Then we adjusted the required outflow accordingly.

Second, I think there has been a revival of the idea that if we mandate some percent of unimpaired flow, we will be replicating nature albeit at a lesser degree. I think, but am not sure, that this "% of unimpaired flow" idea was used in the State Board's recent "Flow Recommendations", and is also under consideration by the BDCP.

Third, I think Bruce H. may be one of the bigger critics of this approach. His view is that it's just not that simple, that you won't automatically get 75% of the fish if you give them 75% of the water. In other words, he would say that the real world IS impaired, and that those impairments to the natural regime change the timing of flows, nature of the flows, nature of the upstream and in-Delta habitat, so that any fish restoration effort needs to address those impairments, rather than simply assuming that unimpaired flows will do the trick.

Fourth, that said, I'm guessing that what we'd like to see in the Workshop is some thought about whether there are correlations between the various "LSZ" parameters and the "unimpaired flow" parameters. And, if so, why are there correlations, what do they mean, and are they useful for any purpose?

Fifth, for my own purpose, I've always assumed that if you change the outflow regime, you would still want it to vary with the so-called natural hydrology. If you don't vary a "LSZ" by "unimpaired flow", then what would you use as the variable instead? And why?

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